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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,658	09/17/2003	An-Sheng Chang	3313-1029P	3802

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EXAMINER

RAHMAN, FAHMIDA

ART UNIT	PAPER NUMBER
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2116

DATE MAILED: 08/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/663,658	CHANG, AN-SHENG	
	Examiner	Art Unit	
	Fahmida Rahman	2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-7, 9-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-7, 9 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This final action is in response to communications filed on 5/18/2006.
2. Claims 1, 7 have been amended, claims 2 and 8 have been canceled, claims 9 and 10 have been added. Therefore, claims 1, 3-7, 9-10 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4, 5, 6, 7, 9, 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Kling et al (US Patent Application Publication 2001/0003207).

For claim 1, Kling et al teach the following limitations:

A method of automatically adjusting the central processing unit (CPU) work frequency (510) comprising the steps of:

- **starting at least one set of voltage sensor** (the sensors are shown in Fig 1);
- **setting triggering conditions** (upper and lower thresholds; threshold setting is explained in [0032]) **for a frequency adjustment**
- **monitoring the sensor in real time and detect its status values** (400)
- **comparing the triggering conditions with the voltage sensor status values in real time** (405);

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- **and adjusting the CPU work frequency (510) according to the comparison result in real time** (if comparison results sending throttle to processor).

For claim 4, thresholds are predetermined and permanently set ([0032]) during production.

For claim 5, threshold may be modified by software control ([0032]).

For claim 6, frequency may be increased (520) or decreased (510).

For claim 7, Georgiou et al teach the following limitations,

A device of automatically adjusting the CPU work frequency comprising (Fig 1, Fig 5):

- **at least one sensor** (Fig 1) **which detects the work status of a host machine** (power consumption) **and outputs a detected value** (a parameter proportional to power as shown in 400), **where sensor is selected from the group consisting of a voltage sensor, current sensor and a load sensor** ([0025] mentions that meter may measure power, current or voltage. Therefore, sensors may be current, voltage or power sensor. Power sensor can be considered as a load sensor, since load is determined by how much power it is consuming);
- **a setting unit which sets triggering conditions** (upper and lower thresholds; threshold setting is explained in [0032]) **for a frequency adjustment**;

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- **a storage unit which stores the triggering conditions set by the setting unit**
(thresholds are stored in the system)
- **a comparing unit which compares the detected value output from the sensor and the triggering conditions stored in the storage unit** (405 shows the comparison, which requires comparing unit);
- **and a frequency adjusting unit** (510 shows the adjustment of the frequency) **which modifies the CPU work frequency according to the comparison result of the comparing unit** (if comparison results sending throttle to processor).

For claims 9 and 10, Kling teaches the limitations as stated above in claim 1. Kling et al further teach that the sensor can be a current or load sensor ([0025] mentions that meter may measure power, current or voltage. Therefore, sensors may be current, voltage or power sensor. Power sensor can be considered as a load sensor, since load is determined by how much power it is consuming).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kling et al (US Patent 6367023), in view of Georgiou et al (US Patent 6047248).

The triggering conditions include single condition (i.e., threshold) in Kling et al. However, Kling et al do not explicitly mention plurality of conditions for a plurality of sensors.

Georgiou et al teach plurality of conditions for plurality of sensors (note lines 24-29 of column 9, which mention that 220 and 230 represent operating temperature and threshold temperature for the sampled unit. Thus, each unit, with corresponding sensor, comprises it's own triggering conditions).

It would have been obvious for an ordinary skill in the art at the time the invention was made to combine the teachings of Kling et al and Georgiou et al. One ordinary skill in the art would be motivated to have plurality of conditions for plurality of sensors, since that would ensure selective controlling of components within the processor as shown in Georgiou et al.

Response to Arguments

Applicant's arguments with respect to claims 1, 3-7, 9-10 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fahmida Rahman whose telephone number is 571-272-8159. The examiner can normally be reached on Monday through Friday 8:30 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on 571-272-3670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fahmida Rahman
Examiner
Art Unit 2116



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